

## ABSTRACT

Techniques and devices are described for reducing splice loss in an optical transmission line. According to one technique, an electric arc is generated from an arc current, the arc current having a level and duration sufficient to produce an electric arc with an intensity and duration sufficient to achieve a desired splicing temperature at a splice point between a first optical fiber and a second optical fiber positioned within the electric arc. The electric arc is used to splice together the first and second optical fibers. After the fibers have been spliced together, the level of the arc current is ramped downward over time, thereby creating a downward ramp in temperature at the splice point from the splicing temperature to a cooler temperature, the downward ramp in temperature being shaped to reduce splice loss. The techniques and devices described herein are suitable for use with various splice combinations.